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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,542	03/02/2004	Vinay G. Sakhrani	5764-001	3383
24112	7590	10/02/2007		
COATS & BENNETT, PLLC 1400 Crescent Green, Suite 300 Cary, NC 27518			EXAMINER ZACHARIA, RAMSEY E	
			ART UNIT 1773	PAPER NUMBER
			MAIL DATE 10/02/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/791,542	Applicant(s) SAKHRANI ET AL.	
	Examiner Ramsey Zacharia	Art Unit 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-28 and 30 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 and 19-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-12, 14-18, 25-28 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 14 March 2007 has been entered.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

3. Claims 1-9 and 19-24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 27 February 2006.

Claim Rejections - 35 USC § 112

4. Claims 10-12, 14-28, and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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5. The term "chlorotrifluoroethylene" in independent claims 10 and 25 renders these claims, as well as claims which depend from 10 and 25, indefinite because chlorotrifluoroethylene is a gas (see the attached OSHA chemical data sheet) and it is unclear how a gas can be a lubricant.

6. Claim 18 recites the limitation "the ionizing gas plasma" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. It is noted that claim 18 depends from claim 10 while the ionizing gas plasma is first recited in claim 15.

Claim Language

7. For the purpose of examination, "chlorotrifluoroethylene" is taken to mean oligomers of chlorotrifluoroethylene having a molecular weight of 500-1,100 and a viscosity at 20 °C of 5-1,500 centistokes (see the entry for Daifloil™ in Table 2 of the instant specification).

Furthermore, claim 18 is taken to depend from claim 15.

Claim Rejections - 35 USC § 102

8. Claims 10-12 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Murayama et al. (US 5,830,577).

Murayama et al. teach a lubricant layer formed at an interface subject to sliding contact (column 1, lines 9-17). The lubricant layer comprises a lubricating guest compound and a host compound (column 3, lines 7-15). The host compound reads on the additive of 14 and 30 since it will have an effect on the viscosity (i.e. a viscosity modifier). The lubricating guest compound may be a perfluoropolyether (column 5, lines 28-57). The lubricant layer may be formed by coating a solution comprising the lubricant dissolved in a solvent (column 10, lines 15-41). The

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lubricant layers are necessarily exposed to an energy source (e.g. the light in the facility in which the layer is formed) at about atmospheric pressure.

Claim Rejections - 35 USC § 103

9. Claims 10-12, 14-28, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams et al. (U.S. Patent 4,822,632) in view of Murayama et al. (US 5,830,577).

Williams et al. teach a surface coated with a lubricant wherein at least one of the surface and the lubricant is treated with an ionizing plasma (column 2, lines 34-41). That is, the surface and/or deposited lubricant are treated with ionizing plasma. The preferred lubricant is a synthetic oil, such as a silicone (column 3, lines 47-48). The plasma may be generated from a variety of gasses, such as air, hydrogen, helium, etc. and performed at any pressure (column 4, lines 12-24). The lubricant may be applied neat or in a solvent with the subsequent removal of the solvent by evaporation (column 3, lines 63-65).

Regarding the limitation that the lubricant is exposed to an energy source at atmospheric pressure, one skilled in the art would readily envisage atmospheric pressure because Williams et al. teach that any pressure can be used. Alternatively, it would have been obvious to one skilled in the art to conduct the plasma treatment at atmospheric pressure since Williams et al. explicitly teach that any pressure may be used.

Williams et al. do not teach the use of a one of the fluorochemicals in the Markush groups recited in instant claims 10 and 25. However, Williams et al. do teach that synthetic oils are the preferred lubricants and cites silicone oil as a suitable lubricant.

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Murayama et al. is directed to lubricants which function at an interface subjected to a sliding contact (column 1, lines 9-12). The lubricant is designed to reducing the static friction coefficient (column 1, lines 36-47), i.e. reduce the forces required for breakout of surfaces from stationary contact into sliding contact. Suitable lubricants include perfluoropolyethers and silicone oil (column 5, lines 34-45).

Murayama et al. show that perfluoropolyethers and silicone oils are known in the art as an equivalent lubricants for reducing static friction. Therefore, because these two lubricants were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute a perfluoropolyethers for the silicone taught by Williams et al. See MPEP 2144.06.

Moreover, because the perfluoropolyether lubricant disclosed by Murayama et al. is taught to reduce static friction, it would have been obvious to use the perfluoropolyether lubricant as the synthetic oil of Williams et al. since it has been held that the selection of a known material based on its suitability for its intended use supported a *prima facie* obviousness determination. See MPEP 2144.07.

Response to Arguments

10. Applicant's arguments with respect to the elected claims have been considered but are moot in view of the new ground(s) of rejection.

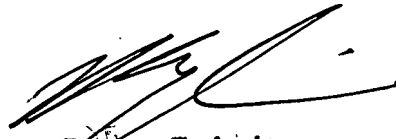
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Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached at (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ramsey Zacharia
Primary Examiner
Tech Center 1700